

SECTION 7. SOLARIS SYSTEM ADMINISTRATION

This section provides an introduction to Solaris system administration using the Common Desktop Environment (CDE). In addition to this section, System Administrators and Operators should read Solaris documentation that is provided with each licensed copy of the Operating System. The Solaris documentation provides much more detail as well as any updates that were implemented in the latest release of the software.

7.1 Overview. To help you organize and manage your work, the desktop provides windows, workspaces, controls, menus, and the Front Panel. The CDE provides access to processes that can alternately be implemented from the command line by passing the appropriate optional parameters to the command when it is keyed in.

a. *Access to the CDE.* Access the CDE by logging in to the system with the root, or other assigned login. To exit, click on the EXIT button. Login as root and enter its password. The Front Panel is displayed on the screen.

b. *The Front Panel.* Normally the Front Panel provides for: a Clock control with the current time displayed; a Calendar control with the current Month and Day displayed; a File Manager control; a Text Editor control; a Mailer control; a Lock button; an EXIT button; a Printer control; a Style Manager control; an Applications Manager control; a Help Viewer control; and a Trash Can control.

c. *The Lock Button.* Click on the Lock button to lock the CDE. A CDE login screen is displayed with the following message: "Display locked by user root. Enter password to unlock". Enter the root password and press <Enter> to unlock the CDE.

d. *Exit from the CDE.* Click on the EXIT button to exit the CDE.

7.2 The CDE Main Menu.

7.2.1 Calendar Control. Use the desktop Calendar to schedule appointments and group meetings, make To Do and appointment lists, and set appointment reminders. To open the Calendar, click the Calendar control in the Front Panel. The Calendar displays the Month view by default. A menu bar is displayed that allows you to access the Appointment Editor and the To Do Editor. You may view the current day, the previous day, and the next day. You can also view a week, month or year calendar by clicking on the applicable button.

7.2.2 File Manager Control. Use the File Manager to create, find, and use workspace objects: files, folders, and applications. To open, click on the File Manager control in the Front Panel. Each of the objects are represented by an icon in File Manager. File Manager enables you to do a number of things with these objects. For example, you can move, copy, open, and delete them. You can also use File Manager to view the contents of your floppy diskettes and CD-ROM. Menus contain the commands for File Manager. The iconic path uses icons to show the location of the folder you are viewing. The text path uses text to show the location of the folder you are viewing. The status line shows the full path name of the folder you are viewing. The view area shows the contents of the folder you are viewing. Each object icon represents a file or folder in the current folder. The message line at the bottom of the window shows how many objects are inside the folder you are viewing. It also shows messages when the File Manager is busy doing actions such as opening a folder.

a. *Select a Single File or Folder.* When you select an icon for a file or folder, its name is highlighted. Many choices in the File Manager's menus apply to the currently selected file or folder. You select an object to use one of the Selected menu choices on that object. The Selected menu contains choices that only affect the currently selected objects. The contents of this menu will change as you select different kinds of objects in the view area. These choices appear dimmed until you select an icon.

(1) Click once on the icon or use the Tab and arrow keys to move the highlight to the icon you want to select. Press the <Spacebar>.

(2) To deselect a file or folder, select another icon or click on an empty area in the File Manager window.

b. *Select Multiple Files or Folders.* Select multiple objects to use one of the Selected menu choices on these objects. Selecting multiple files is useful if you want to delete several files at once, or move a group of files to a new folder.

(1) Press mouse button 1 in a blank area of the view, drag the mouse to draw a box around the icons you want to select, then release the mouse button. Click to select the first icon, then hold down the <Ctrl> key and click to select each additional icon.

(2) To remove a single icon from a selected group, hold the <Ctrl> key and click on the icon you want to deselect.

(3) Using the keyboard, select the first file or folder icon by pressing the <Spacebar>. For each additional icon you want to select, move the highlight to it, then press <Ctrl>+<Spacebar>.

c. Rename a File or Folder.

(1) Select the file or folder name by clicking on the name beneath its icon. The name will be put in a text field. Type the new name. Press <Enter>. If you click outside the name when you are done, your changes will be lost.

(2) To cancel a rename operation, press <Esc>.

d. Open a File or Folder. The action taken when you open an icon depends on the type of icon. For example, opening a folder icon changes the File Manager view to show the contents of that folder. Opening a data file usually starts the application that created the file and loads the file.

(1) Double click the icon. Select the icon, then go to the menu bar and choose Open, Open in Place or Open New View from the Selected menu.

(2) Choose an Open choice from the icon's pop-up menu. Display it by pressing <Shift>+<F10> or mouse button 3.

(3) Place the mouse pointer over a folder. Double click and hold down the button on the second click. Drag the folder to a location on the screen and drop the icon. A view of that folder is opened at the drop location.

e. Drag and Drop a File or Folder. You cannot drag and drop a file or folder without a mouse or other pointing device.

(1) Put the mouse pointer over the object. Press and hold mouse button 1, known as the drag button. Drag the icon to where you want to drop it. Release the mouse button.

(2) If more than one icon is selected, drag the entire group by dragging any of the selected icons.

(3) To cancel a drag in progress, press <Esc> before releasing the mouse button.

f. *Create a New File or Folder.*

(1) Choose New File or New Folder from the File menu. Type a name into the New File Name or New Folder Name field. Click OK or press <Enter>.

(2) To close the New File or New Folder dialog box without creating a new file or folder, click on Cancel or press <Esc>.

(3) Another way to create a file is to copy an existing file, then rename the copy. Or, create a new file within an application. For example, the Text Editor creates a new file when you save a new document.

g. *Move a File or Folder.* If you attempt to move a file or subfolder from a folder where you do not have permission to make changes, File Manager may create a copy of the file or folder in the destination folder and display an error message indicating that you cannot delete the original.

(1) Make the destination folder visible by opening a File Manager view of the contents of the destination folder or open a File Manager view that shows the icon of the closed destination folder. Select the file or folder to be moved. Drag the file or folder and drop it onto the destination folder.

(2) Using the keyboard, press the <Tab> and direction keys to move the highlight to the file or folder to be moved. Press the <Spacebar> to select the object. Choose Move to from the Selected menu. Type a name into the Destination Folder text box. For example, if you want to move a file named "report" into the folder /u/john, you would type /u/john. Click on OK or press <Enter>.

h. *Copy a File or Folder.* You can force a copy operation to become a move operation by holding down the <Shift> key while you drag the icon.

(1) Make the destination folder visible by opening a File Manager view of the contents of the destination folder or open a File Manager view that shows the icon of the closed destination folder. Select the file or folder to be copied. Press and hold the <Ctrl> key. Drag the file or folder and drop it onto the destination folder. Make sure that you release the mouse button before you release the <Ctrl> key. Otherwise, you will move instead of copy the file or folder.

(2) Using the keyboard, select the icon. Choose Copy To from the Selected menu. Type a name into the Destination Folder text box. For example, if you want to

copy a file named “report” into the folder /u/john, you would type /u/john. Click on OK or press <Enter>.

(3) To close the Copy file dialog box without copying a file, click on Cancel or press <Esc>.

i. *Create a Symbolic Link.* A link icon is a copy of an icon that points to the same file or folder as the original icon. Any changes you make after opening the link icon will also appear when you access the file or folder using the original icon.

(1) Press and hold down the <Shift> key and the <Ctrl> key while dragging and dropping the icon of a file or folder onto the icon of a new folder. When you drop the icon, File Manager creates a symbolic link in the new folder that points to the original file or folder. Make sure that you release the mouse button before you release the <Shift> key and the <Ctrl> key; otherwise, you will move instead of link the file or folder.

(2) Using the keyboard, press the <Tab> and a direction key to move the highlight to the icon of the file or folder to which you want to link. Press the <Spacebar> to select the icon. Choose Copy as Link from the Selected menu. Type a name into the Destination Folder text box including the path for the name of the folder where you want this link icon to appear. If you want this link icon to have a different name than the original icon, type a new name in the Name for Copy text box. Click OK or press <Enter>.

j. *Change the Owner of a File or Folder.* Only a SA can change the ownership of a file. If you have the authority to log in as a super-user, you must do so before beginning the process. If you give ownership of a file or folder to another user, you will not be able to change it's permissions again unless that user returns ownership to you.

(1) Select the icon of the file or folder. Choose Properties from the Selected menu or from the icon's pop-up menu by pressing <Shift>+<F10> or mouse button 3. Type the new owner's name into the Owner Name text box.

(2) Click OK or press <Enter>.

k. *Change Permissions on a File or Folder.* You must be the owner or the SA in order to change the permissions of a file or folder. The Group row of permissions shows the permissions for users who are members of the group listed in the Group Name text box. You can specify a different group by typing a new name in this box. If you do not

have permissions to change the properties of a file, some of the controls in the File Properties dialog box are inactive.

(1) Select the icon for the file or folder. Choose Properties from the Selected menu or from the icon's pop-up menu by pressing <Shift>+<F10> or mouse button 3. Select the permissions for the file or folder.

(2) Click OK or press <Enter>.

l. *View a Folder.* You can change to another folder many ways.

(1) Double click a folder icon.

(2) Select a folder icon and choose Open in Place from the Selected menu to open the folder in the current window. Select a folder icon and choose Open New View from the Selected menu to open it in a new window.

(3) Choose the Open in Place or Open New View command from the folder's pop-up menu by pressing <Shift>+<F10> or mouse button 3.

(4) Double click on a folder in the iconic path to change the view to that folder.

(5) Click the text path line to change it into a text field. Type the name of the path you want and then press <Enter>.

(6) In the text path line, double click a segment of the current path. For example, if the current folder is /users/tom/.dt/types, you can change to the /users/tom/ folder by double clicking the word tom.

m. *Go to Your Home Folder.* Choose Go Home from the File menu.

n. *Change to Parent Folder.* Two options are available.

(1) Choose Go Up from the File menu.

(2) Double click the ..(go-up) icon.

o. *Open a Terminal.* This procedure opens a terminal emulation window with the same current folder as the File Manager window. This is a quick way to type a command

to affect the contents of the folder you are currently viewing. You must have execute permission for a folder before you can open a Terminal window from it.

(1) Choose Open Terminal from the File menu.

(2) Click on the Right Mouse button in an application and choose Terminal.

p. *Put a File or Folder on the Workspace Backdrop.* This procedure creates a copy of the icon on the workspace backdrop. Only File Manager objects can be placed on the backdrop. Objects inside other desktop applications cannot be dragged onto the backdrop. Any changes you make to this copy will also be made to the original that is still in File Manager.

(1) Switch to the workspace where you want to display the object. Then, drag and drop the object's icon onto the desktop or workspace backdrop. Or, select the icon, then choose the Put in Workspace command from the Selected menu or from the icon's pop-up menu. Display the menu by pressing <Shift>+<F10> or mouse button 3.

(2) You can repeat these steps to put an icon on the desktop in as many workspaces as you want.

q. *Remove a File or Folder from the Desktop.* Removing a file or folder's icon from the workspace desktop does not delete the original file or folder (the icon that is in the File Manager window). Do not drag a workspace backdrop icon to the Trash Can unless you want to delete both the backdrop icon and the original.

(1) Change to the workspace where the desktop icon resides.

(2) Choose Remove From Workspace from the icon's pop-up menu. Display the menu by pressing <Shift>+<F10> or mouse button 3.

r. *Find a File by Name.*

(1) Choose Find from the File menu.

(2) Type the name of the file or folder you want to find into the File Name field. You can use wildcard characters to help locate a file or folder name. For example, "fe*" will find all files that begin with "fe". The searches are case sensitive. If you type a capital letter, it will only find names with the same capitalization.

(3) Type the name of the folder where you want to start the search into the Search Folder field. By default, this field contains the name of the current folder. Find will search this folder and all its sub-folders.

(4) Click Start or press <Enter>. File Manager begins searching the Search folder and the folders it contains for files that match the name you provided. Matches that are found are listed in the Files Found list. Once you have found an object, you can press Open Folder to open the folder it is in, or press Put in Workspace to place its icon on the current backdrop.

(5) To stop the search, click the Stop button or press <Enter>.

s. *Find a File by Contents.* The file name and contents can be specified using the same regular expression syntax allowed by the Solaris find command.

(1) Choose Find from the File menu.

(2) Type the text string you want to search for into the File Contents field. Case is ignored for this string (upper- and lowercase letters are equivalent). You do not have to use complete words or wildcards. For example, if you type fi it will find both fish and File.

(3) You can use the File or Folder name field to restrict and speed up the search. This is optional.

(4) Type the name of the folder where you want the search to begin into the Search Folder field. By default, this field contains the name of the current folder.

(5) Click the Start button or press <Enter>. File Manager begins searching the search folder and the folders it contains for files that match the text you provided. Matches that are found are listed in the Files Found list. Once you have found an object, you can select it in the list and press Open Folder to open the folder it is in or press Put in Workspace to place its icon on the current backdrop.

(6) To stop the search, click the Stop button or press <Enter>.

t. *View Files and Folders on a Diskette.* If the diskette is formatted and readable by the system, File Manager displays a view of the diskette's contents. If the diskette is unformatted or is unreadable by the system, File Manager displays the Unreadable Floppy dialog box. If your system has more than one disk drive, File Manager opens one

window for each readable diskette you insert when you choose Open Floppy from the File menu.

(1) Insert the diskette into a disk drive. Select Open Floppy from the File Manager control subpanel on the Front Panel.

(2) Insert the diskette into a disk drive and open File Manager. Select Open Floppy from the File menu.

u. *View Files and Folders on a CD-ROM.* When you insert a CD-ROM into a CD-ROM drive, File Manager displays a window containing a view of the contents of the CD-ROM. If you close the File Manager window for the CD-ROM, you can reopen it by selecting Open CD-ROM from the File Manager File menu or from the File Manager control subpanel on the Front Panel.

v. *Format a Diskette.*

(1) From the diskettes File Manager window, choose Format Floppy from the File menu. Select one of three formatting options (UNIX, MSDOS, or NECDOS) in the Format Floppy dialog box. Click Format or press <Enter>.

(2) To rename the diskette, type the new name into the Floppy name text field of the Format Floppy dialog box. This is optional.

w. *Rename a Diskette.*

(1) From the diskette's File Manager window, choose Rename Floppy from the File menu. The Rename Floppy dialog box appears. Type the new name into the Floppy Name text field.

(2) Click Rename or press <Enter>.

x. *Eject a Diskette or CD-ROM.*

(1) From the diskette's or CD-ROM's File Manager window choose Eject from the File menu.

(2) Remove the diskette or CD-ROM from the disk drive.

y. Copy Files and Folders to a Diskette.

(1) Select the icon for the file or folder you want to copy. Choose Copy to from the *Selected* menu. Type a full path name into the Destination Folder text field of the Copy Object dialog box. Use /floppy as the directory name. For example, if you want to copy the file report onto the diskette named john, you would type /floppy/john. Type the file or folder name into the Name for copy text field of the Copy Object dialog box.

(2) Click OK or press <Enter>.

z. Move Files and Folders to a Diskette.

(1) Select the icon for the file or folder you want to move. Choose Move to from the Selected menu. Type a full path name into the Destination Folder text field of the Move Object dialog box. Use /floppy as the directory name. For example, if you want to copy the file report onto the diskette named john, you would type /floppy/john.

(2) Click OK or press <Enter>.

aa. *Delete Files and Folders from a Diskette.* Do this in the same manner as you would any file or folder contained in a folder's File Manager view.

ab. Create Files and Folders on a Diskette.

(1) Choose New File or New Folder from the File menu. Type a name into the New File name field of the New File dialog box or New Folder name field of the New Folder dialog box. Click OK or press <Enter>.

(2) To close the New File or New Folder dialog box without creating a new file or folder, click Cancel or press <Esc>.

7.2.3 Text Editor Control.

a. *Uses.* The Text Editor enables you to create and edit short documents such as memos, mail messages, or resource files.

b. *Start the Text Editor.* You can start the Text Editor using either one of these methods.

(1) Click the Text Editor control in the Front Panel.

(2) Open the Personal Applications subpanel in the Front panel and click the Text Editor control.

(3) Drag a file icon to the Text Editor control in the Front Panel.

(4) Double click a data file icon in File Manager.

(5) Select a data file icon in File Manager and choose Open from the Selected menu.

(6) Type the following command in a Terminal window:

dtpad filename &

7.2.4 Mailer Control. Use Mailer to send, receive, and manage your electronic mail messages. You can send and receive attachments: image files, document files, or executable files. To open the Mailer, click on the Mailer control in the Front Panel. You can drag and drop files from other desktop applications, such as File Manager, for use as attachments in your mail messages

a. *Receive Messages.* When you receive an electronic or email message, you can act on it in various ways:

(1) Save a message to a Mailbox in your file system.

(2) Reply to the sender of the message.

(3) Forward the message to another recipient along with your own message.

(4) Delete the message.

(5) Print the message.

b. *Start Mailer.* When you start Mailer for the first time on your system, it looks for whether you have a local Inbox or remote Internet Messaging Access Protocol (IMAP) Inbox in your email setup. The SA must set up a server that uses IMAP4 before you can access and work with email in remote mailboxes.

(1) If the setup does not indicate the type of mailbox, Mailer prompts you to specify the mailbox type.

(2) If the setup indicates that your mailbox is local, Mailer opens your Inbox that usually resides in the directory /var/mail/user_name.

(3) If the setup indicates that your mailbox is remote, Mailer opens the Mailer Login Dialog Box so you can log in to the IMAP server.

(4) After Mailer starts, the mailbox is displayed, along with message headers and a view of the selected message.

7.2.5 Print Control. After you submit a document (print job) for printing, you can use the Print Manager or Printer Jobs applications to find out about the progress of the printing. Printer Jobs gives you information about jobs on a single printer. Print Manager shows all the printers that are on your system. Print Manager provides an easy way to print files, find print jobs, cancel print jobs, and look at printer and print job status.

a. *Open Print Manager.*

(1) To open Print Manager, click the Print Manager control in from the Personal Printers subpanel, which you display by clicking on the arrow control above the Printers control.

(2) There are two ways to open the Printer Jobs application:

(a) Click the Printer control in the Front Panel. This will open the default printer if you have not copied a printer from the subpanel. If you have copied a printer from the subpanel, that printer will be opened instead.

(b) Click a printer icon in the Personal Printers subpanel, which you display by clicking on the arrow control above the Printers control.

b. *Set Print Manager Options.* To set printer options, click on View and Set Options. You set Representation, Jobs to Show, Status and Updates. You have the option to click on Apply, Cancel, help, or OK.

7.2.6 Style Manager Control. With Style Manager, you can easily customize the visual elements and system behavior of the desktop. Choose or modify the color palette, select a font, change the behavior of your mouse, or perform other tasks that tailor the desktop environment to suit your preferences. To open, click the Style Manager control in the Front Panel.

7.2.7 Application Manager. Application Manager is a container for the applications and other tools available on your system. To open, click on the Application Manager control in the Front Panel.

a. *Top Level.* The top level contains a set of application groups. An application group is a special folder containing the application and, optionally, other useful files such as sample data files, templates, and README files. In File Manager and application Manager, files and folders are represented as icons, and these icons are usually labeled with the file name. Action icons are sometimes an exception to this rule. Each application group is a folder containing one or more application icons (application icons are also called action icons). Application Manager behaves very much like File Manager. This is because it is a File Manager view of a special folder on your system used to gather registered applications. Login Manager creates the Application Manager folder each time you log in. Ordinarily, you do not need to know the location of the Application Manager folder. However, it may be useful to you if you are trying to troubleshoot problems. Its location is:

`/var/dt/appconfig/appmanager/special_folder_name`

(where `special_folder_name` is a name assigned by the system that is unique for your system and login name.)

NOTE: You should never attempt to directly modify the `special_folder_name` folder. After Login Manager creates the folder, it runs a desktop program named `dtappgather` that gathers all the application groups. During a session, you can rerun `dtappgather` by double clicking Reload Applications in the Desktop_Tools application group.

b. *The Applications Manager File Menu.* The Applications Manager File Menu contains:

- (1) New Folder which prompts for a folder name to create a new folder.
- (2) New File which prompts for a file name to create a new file.
- (3) Go Up which moves up one level in the folder hierarchy.
- (4) Go To which displays the Go To dialog box and lets you type in a new folder name or choose one from a list of folders you have previously gone to.

(5) Find which displays the Find dialog box and lets you search for files and folders based on file name patterns or file contents.

(6) Close which closes the current Application Manager view.

c. *Applications Groups.* The applications groups in your Application Manager are either built in or have been placed there by the SA. They may be located on your own system or can be elsewhere in the network. Some applications on your desktop include: Desktop_Apps; Desktop_Controls; Desktop_Tools; Information; OpenWindows; and, System_Admin.

d. *System Administration.* System_Admin includes: Admintool; AnswerBookX Admin; Font Administrator; Power Manager; and, Suspend System. Managing your system with Admintool enables you to perform the following tasks.

(1) *Manage User Accounts.* Used to add, delete, or modify user accounts. The software makes appropriate changes in the system's /etc/passwd file.

(2) *Manage Groups.* Used to add and delete groups or modify group membership. The software makes appropriate changes in the system's /etc/group file.

(3) *Manage Hosts.* Used to add, delete, or modify hosts, enabling remote access to those hosts. The software makes appropriate changes in the system's /etc/inet/hosts file.

(4) *Manage Printers.* Used to add, delete, or modify a system's printer setup. The software makes appropriate changes in the system's /etc/lp directory.

(5) *Manage Serial Ports.* Used to enable and disable serial port services. It sets up software services necessary to use a modem or terminal attached to a system's serial port.

(6) *Manage Software.* Used to add or remove software. It adds software from a product CD or disk to an installed system, or removes software from an installed system.

e. *Admintool.* To use Admintool, you must be a member of group 14, the system administration (sysadmin) group.

(1) To add yourself to group 14, you must be root and then start Admintool.

(a) Select Groups from the Browse menu. Click on group-ID 14. That line is highlighted. Select Modify from the Edit menu on the Admintool:Groups main window. The Modify Group window is displayed. Add your user name to the Members List. Click on OK.

(b) Verify that the user name is in the Members column by locating it in the Admintool:Groups main window.

(2) To add or delete a group:

(a) To add a group, select Groups from the Browse menu. Select Add from the Edit menu on the Admintool:Groups main window. The Add Group window is displayed. Type the new group name in the Group Name text box. Type the group-ID in the Group ID text box. Type the user names to be included in this group. Click on OK.

(b) To delete a group, choose Groups from the Browse menu. Select the group you want to delete from the Admintool:Groups main window. Choose Delete from the Edit menu. A window is displayed asking you to confirm the deletion. Click on OK.

(c) The list of groups displayed in the Admintool:Groups main window is updated.

(3) To add or delete members in a group:

(a) Choose Groups from the Browse menu. Select the group entry to modify from the Admintool:Groups window. Choose Modify from the Edit menu. The Modify window contains the selected group entry. Either type user names or delete user names in the Members List text box. If adding additional group members, type user names at the end of the list. Separate the user names with commas. If deleting user names, use the mouse to select the user name to delete. Press the <Delete> key to delete the user name. You can also use the <Backspace> key to delete the user name one character at a time. Click on OK.

(b) The group information displayed in the main window is updated.

(4) To add, modify, and delete a user account:

(a) To add a new user account, select Users from the Browse menu. Select Add from the Edit menu on the Admintool:Users main window. The Add User window is displayed. Fill in the USER IDENTITY portion of the displayed form. Type a user

name in the User Name text box. Type a user-ID in the User ID text box. Type the Primary and, if you want, the Secondary Groups that this user will belong to. Either group names or group-IDs are acceptable entries. Select the user's default login shell. Fill in the ACCOUNT SECURITY portion of the form. Select the method you want to use for the user to establish a password. In most cases, choose either "Cleared until first login" or "Normal Password". If you want Admintool to create a home directory for the user, fill in the HOME DIRECTORY portion of the form. Click on OK.

(b) To modify a user account, select Users from the Browse menu. Select the user entry to modify from the Admintool:Users main window. Select Modify from the Edit menu on the Admintool:Users main window. The Modify User window is displayed and contains the selected user entry. Make the needed changes to the user account. Click on OK.

(c) To delete a user account, select Users from the Browse menu. Select the user entry to delete from the Admintool:Users main window. Select delete from the Edit menu on the Admintool:Users main window. A window is displayed asking you to confirm the deletion. Click on Delete. The selected user is deleted and the user information displayed in the main window is updated.

(5) To add and modify access to remote hosts and delete a host entry:

(a) To add access to remote hosts, select hosts from the Browse menu. Select Add from the Edit menu on the Admintool:Hosts main window. The Add Host window is displayed. Fill in the form. Type the new host name in the Host Name text box. Type the new host name's IP address in the IP address box. Click on OK.

(b) To modify access to remote hosts, choose Hosts from the Browse menu. Select the host entry to modify from the Admintool:Hosts window. Choose Modify from the Edit menu. The Modify window contains the selected host entry. make the needed changes to the host name or the IP address. Click on OK.

(c) To delete a host entry, select Hosts from the Browse menu. Select the host entry to delete from the Admintool:Hosts main window. Select Delete from the Edit menu on the Admintool:Hosts main window. A window is displayed asking you to confirm the deletion. Click on Delete. The selected host is deleted.

(6) To add, modify, and delete access to a local or remote printer:

(a) To add access to a local printer, select Printers from the Browse menu. The Admintool:Printers main window appears. Select Local Printer from the Add menu on the Edit menu. Fill in the form. Click OK.

(b) To add access to a remote printer, select Printers from the Browse menu. Select Access to Printer from the Add menu on the Admintool:Printers main window. Fill in the form. Click on OK.

(c) To modify access to a printer, select Printers from the Browse menu. Select the printer entry to modify from the Admintool:Printers window. Choose Modify from the Edit menu. The Modify Printer window is displayed and contains the selected printer entry. Make the needed changes to the printer entry. Click on OK.

(d) To delete printer access, select Printers from the Browse menu. Select the printer entry to delete from the Admintool:Printers main window. The printer can be either a local or remote printer. Select Delete from the Edit menu on the Admintool:Printers main window. A window is displayed asking you to confirm the deletion. Click on OK.

(7) To add and view software, and read the Description window:

(a) To add software, select Software from the Browse menu. Select Add from the Edit menu on the Admintool:Software main window. Determine your next step based on whether the software resides on a mounted CD-ROM drive or on a system's hard disk. If the software is on a mounted CD-ROM drive, select CD with Volume Management or CD without Volume Management. If the software resides somewhere other than the default path, specify the correct mount point for the software. If the software is on a system's hard disk, specify the absolute path to the directory with the software. When you specify a path where software resides, Admintool:Software expects to find a .cdtoc file, .clustertoc file, or a directory that has a pkginfo file. If Admintool:Software finds any of these, it displays software available for installation. If it does not find any of these, it displays an error message that says, "No installable software on the media." This path terminates with "Solaris_X.X. Select software to add to the local system from the Software window. Click the Add button. Admintool starts an xterm display that shows the output of any scripts used to install the software. These scripts may be interactive and require your input.

(b) The Admintool:Add Software screen shows software available to be installed on your system. To view the available software and software descriptions, use the vertical and horizontal scrollbars. Each time you select a software product in the Add

Software window, the Description window changes to display information about that software product.

(8) To add a terminal or modem:

(a) To add a terminal, select Serial Ports from the Browse menu. Select the port for the terminal in the Admintool:Serial Ports main menu. Select Modify from the Edit menu. The Modify window appears in Basic Detail mode. Select Terminal - Hardwired from the Template menu. Change the values of template entries if desired. Click on OK to configure the port.

(b) To add a modem, select Serial Ports from the Browse menu. Select the port that will be used with a modem from Admintool:Serial Ports main window. Select Modify from the Edit menu. The Modify window appears in Basic Detail mode. Select the modem configuration from the Template menu that meets or most closely matches your modem service. Change values of template entries if desired. Click on OK to configure the port.

(c) To initialize a Port without configuring it, select Serial Ports from the Browse menu. Select the port that you want to initialize from the Admintool:Serial Ports main window. Select Modify from the Edit menu. The Modify window appears in Basic Detail mode. Select Initialize Only - No Connection from the Template menu. Click on OK to initialize the port.

7.2.8 Help Viewer Control. The Help Viewer organizes information into topics. You choose and display help topics in a help window.

a. *Choose a Topic.* You can choose a topic in two ways:

(1) Select a title in the list of topics at the top of the help window.

(2) Choose a hyperlink in the display area of the help window.

b. *Hyperlink.* A hyperlink is an active word, phrase, or graphic that "jumps" to a related topic. In a help window, any underlined text is a hyperlink. A gray open-cornered box identifies a graphic hyperlink.

7.2.9 Trash Can Control. To view the Trash Can contents, click on the Trash Can control in the Front Panel. Various options are allowed.

a. *Delete a File or Folder.* To delete a file or folder to the Trash Can:

(1) Choose the Put in Trash command from the icon's pop-up menu. Display the menu by pressing <Shift>+<F10> or mouse button 3.

(2) Select the file or folder's icon, then choose Put in Trash from the Selected menu.

(3) Drag and drop the file or folder's icon onto the Trash Can control in the Front Panel.

(4) Drag a file or folder's icon to the open Trash Can window.

b. *Move a File or Folder.* Move a file or folder from the Trash Can back into File Manager. To "put back" a file means to take it out of the trash and put it back into File Manager.

(1) Choose the Put Back command from the icon's pop-up menu. Display the menu by pressing <Shift>+<F10> or mouse button 3.

(2) In the Trash Can window, select the file or folder you want to retrieve, then choose Put Back from the File menu.

(3) Drag the file or folder's icon from the Trash Can window to the File Manager window.

c. *Shred a File or Folder.* When you shred a file, it is permanently erased. It cannot be recovered unless you have a copy you have stored on backup media.

(1) In the Trash Can window, select the file or folder you want to permanently delete from the Trash Can and choose Shred from the File menu.

(2) Choose Shred from the pop-up menu for the icon. Display the menu by pressing <Shift>+<F10> or mouse button 3.

7.3 Utilities and Symbolic Names. In addition to the desktop, administrators and operators use other utilities and symbolic names to complete specific tasks.

a. *Check for Media in a Drive.* **volcheck** – Checks for media in a drive and by default checks all floppy media.

(1) *Description.* The **volcheck** utility tells Volume Management to look at each /dev/pathname in sequence and determine if new media has been inserted in the drive. The default action is to volcheck all checkable media managed by Volume Management. Due to a hardware limitation in many floppy drives, the act of checking for media causes mechanical action in the floppy drive. Continuous polling of the floppy drive will cause the drive to wear out. It is recommended that polling the drive only be performed during periods of high use.

(2) *Format.* # **volcheck** [-options] pathname

(3) *Examples.*

volcheck -v /dev/diskette

Asks Volume Management to examine the floppy drive for new media.

volcheck -i 2 -t 600 /dev/diskette1 &

Asks Volume Management if there is a floppy in the floppy drive every 2 seconds for 600 seconds (10 minutes).

(4) *Options.*

-i secs Set the frequency of device checking to seconds. The default is 2 seconds. The minimum frequency is 1 second.

-t secs Check the named device(s) for the next seconds. The maximum number of seconds allowed is 28800, which is 8 hours. There is no default total time.

-v Verbose.

b. *Format Floppy Diskette or PCMCIA Memory Card.* **fdformat** – Formats and verifies new floppy diskettes or PCMCIA memory cards and indicates whether any bad sectors are encountered.

(1) *Description.* A utility for formatting both diskettes and PCMCIA memory cards. All data on the card is destroyed. If no device name is given, fdformat uses the diskette as a default. By default, fdformat uses the configured capacity of the drive to format the diskette. A density option does not have to be specified. However, a density option must be specified when using a diskette with a lower capacity than the drive's default. A PCMCIA memory card with densities from 512KB to 64MB may be formatted. After formatting and verifying, fdformat writes an operating-system label on block 0. Use the -t dos option (same as the -d option) to put an MSDOS file system on the diskette or PCMCIA memory card after the format is done. Use the -t nec option with the -M option (same as the -m option) to put an NEC-DOS file system on a

diskette. Otherwise, `fdformat` writes a SunOS label in block 0. A diskette or PCMCIA memory card formatted using the `-t dos` option (or `-d`) for MSDOS will not have the necessary system files, and is not bootable. Currently, bad sector mapping is not supported on floppy diskettes or PCMCIA memory cards. Therefore, a diskette or memory card is unusable if `fdformat` finds an error (bad sector). Trying to boot from it on a PC will result in the following message:

```
Non-system disk or disk error
Replace and strike any key when ready.
```

(2) *Format.* # **fdformat** [-options] [devname]

(3) *Examples.*

```
# fdformat /dev/diskette1
Format a diskette.
```

(4) *Options.*

-D Format a 720KB (3.5 inch) or 360KB (5.25 inch) double-density diskette (same as the `-l` or `-L` options). This is the default for double-density type drives. It is needed if the drive is a high- or extended-density type.

-e Eject the diskette when done. This feature is not available on all systems.

-E Format a 2.88MB (3.5 inch) extended-density diskette. This is the default for extended-density type drives.

-f Force. Do not ask for confirmation before starting format.

-H Format a 1.44MB (3.5 inch) or 1.2MB (5.25 inch) high-density diskette. This is the default for high-density type drives. It is needed if the drive is the extended-density type.

-M Write a 1.2MB (3.5 inch) medium-density format on a high-density diskette. Use only with the `-t nec` option. This is the same as using `-m`. This feature is not available on all systems.

-U unmount any file systems and then format.

-q Quiet. Do not print status messages.

-v Verify each block of the diskette after the format.

-x Skip the format, and only write a SunOS label or an MSDOS file system.

-b label Label the media with a volume label. A SunOS volume label is restricted to 8 characters. A DOS volume label is restricted to 11 uppercase characters.

-B filename Install special boot loader in filename on an MSDOS diskette. This option is only meaningful when the `-d` option (or `-t dos`) is also specified.

-t dos Install an MSDOS file system and boot sector formatting. This is equivalent to the DOS format command or the -d option.

-t nec Install an NEC-DOS file system and boot sector on the disk after formatting. This should be used only with the -M option. This feature is not available on all systems.

devname Replace devname with rdiskette0 (systems without Volume Manager) or floppy0 (systems with Volume Manager) to use the first drive or rdiskette1 or floppy1 to use the second drive. If devname is omitted, the first drive, if one exists, will be used. For PCMCIA memory cards, replace devname with the device name for the PCMCIA memory card which resides in /dev/rdisk/cNtNdNsN or /dev/dsk/cNtNdNsN. If devname is omitted, the default diskette drive, if one exists, will be used.

c. *Eject Media.* **eject** – Eject media such as a CD-ROM and a floppy from a drive.

(1) *Description.* It is used for those removable media devices that do not have a manual eject button, or for those that do but are managed by Volume Management. The device may be specified by its name or by a nickname. If Volume Management is running and no device is specified, the default device is used. Only devices that support eject under program control respond to this command. eject responds differently, depending on whether or not Volume Management is running.

(a) *With Volume Management.* When eject is used on media that can only be ejected manually, it will do everything except remove the media, including un-mounting the file system if it is mounted. In this case, eject displays a message that the media can now be manually ejected. If a window system is running, the message is displayed as a pop-up window, unless the -p option is supplied. If no window system is running or the -p option is supplied, a message is displayed both to stderr and to the system console that the media can now be physically removed.

(b) *Without Volume Management.* When Volume Management is not running and a pathname is specified, eject sends the eject command to that pathname. If a nickname is supplied instead of a pathname, eject will recognize the following list:

| <u>Nickname</u> | <u>Path</u> |
|-----------------|-----------------|
| fd | /dev/rdiskette |
| fd0 | /dev/rdiskette |
| fd1 | /dev/rdiskette1 |
| diskette | /dev/rdiskette |
| diskette0 | /dev/rdiskette0 |
| diskette1 | /dev/rdiskette1 |

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| | |
|------------|-----------------|
| rdiskette | /dev/rdiskette |
| rdiskette0 | /dev/rdiskette0 |
| rdiskette1 | /dev/rdiskette1 |
| floppy | /dev/rdiskette |
| floppy0 | /dev/rdiskette0 |
| floppy1 | /dev/rdiskette1 |

(c) *Reproducing Nickname and Path List.* The list above can be reproduced with the `-n` option. Do not physically eject media from a device containing mounted file systems. `eject` automatically searches for any mounted file systems which reside on the device and attempts to unmount them prior to ejecting the media. If the unmount operation fails, `eject` prints a warning message and exits. The `-f` option may be used to specify `eject` even if the device contains mounted partitions. This option works only if Volume Management is not running. `eject` can also display its default device and a list of nicknames.

(2) *Format.* # **eject** [-options] [device|nickname]

(3) *Examples.*

```
# eject /dev/diskette0
Ejects a floppy diskette.
# eject /dev/cdrom0
Ejects a CD-ROM.
```

(4) *Options.*

- d Display the name of the default device to be ejected.
- f Force the device to eject even if it is busy, if Volume Management is not running.
- n Display the nickname to device name translation table.
- p Do not try to call the `eject_popup` program.
- q Query to see if the media is present.

(5) *Exit Status.* A short help message is printed if an unknown option is specified. A diagnostic is printed if the device name cannot be opened or does not support `eject`. "Device Busy. An attempt was made to eject a device that has a mounted file system. A warning message is printed when doing a forced eject of a mounted device."

- 0 The operation was successful or, with the `-q` option, the media is in the drive.
- 1 The operation was unsuccessful or, with the `-q` option, the media is not in the drive.
- 2 Invalid options were specified.
- 3 An `ioctl()` request failed
- 4 Manually ejectable media is now okay to remove.

d. *Mount or Unmount.* **mount**, **umount** – Mount or un-mount file systems and remote resources.

(1) *Description.* **mount** attaches a file system to the file system hierarchy at the mount point, which is the pathname of a directory. If the mount point has any contents prior to the mount operation, these are hidden until the file system is un-mounted. **umount** un-mounts a currently mounted file system which, may be specified either as a mount-point or as special, the device on which the file system resides. **mount** and **umount** maintain a table of mounted file systems in `/etc/mnttab`. **mount** adds an entry to the mount table. **umount** removes an entry from the table. If the directory on which a file system is to be mounted is a symbolic link, the file system is mounted on the directory to which the symbolic link refers, rather than on top of the symbolic link itself.

(2) *Format.* # **mount**, **umount** [-options] mount-point

(3) *Examples.*

```
# mount /dev/diskette /mnt
Mount to /mnt.
# umount /dev/diskette /mnt
Unmount /mnt.
```

(4) *Options.*

-F FSType Used to specify the FSType on which to operate. The FSType must be specified or must be determinable from `/etc/vfstab`, or by consulting `/etc/default/fs` or `/etc/dfs/fstypes`.

-a [mount-points] Perform mount or umount operations in parallel, when possible. If mount points are not specified, **mount** will mount all file systems who's `/etc/vfstab` "mount at boot" field is "yes". If mount points are specified, then `/etc/vfstab` "mount at boot" field will be ignored. If mount points are specified, **umount** will only umount those mount points. If none is specified, then **umount** will attempt to umount all

file systems in `/etc/mnttab`, with the exception of certain system required file systems: `/`, `/usr`, `/var`, `/proc`, `/dev/fd`, and `/tmp`.

- p Print the list of mounted file systems in the `/etc/vfstab` format. Must be the only option specified.

- v Print the list of mounted file systems in verbose format. Must be the only option specified.

- V Echo the complete command line, but do not execute the command. `umount` generates a command line by using the options and arguments provided by the user and adding to them information derived from `/etc/mnttab`. This option should be used to verify and validate the command line.

- o Specify FSType-specified options in a comma separated (without spaces) list of sub-options and keyword-attribute pairs for interpretation by the FSType-specific module of the command.

- O Overlay mount. Allow the file system to be mounted over an existing mount point, making the underlying file system inaccessible. If a mount is attempted on a pre-existing mount point without setting this flag, the mount will fail, producing the error “device busy”.

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